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WOLVERHAMPTON.



VIEW OF WOLVERHAMPTON.

WOLVERHAMPTON is the name both of a parish in Staffordshire, and of the principal town in that parish. The parish contains the towns of Wolverhampton and Bilston, the chapelries of Pelsall, Wednesfield, and Willenhall, and the townships of Featherstone, Hatherlton, Hilton, and Knivaston. It is of the town of Wolverhampton that we here propose to speak.

Wolverhampton is about 123 miles from London. The name originated in the following circumstance:—It was called Hanton or Hamton, prior to the year 996, when Wulfrana, sister of King Edgar, and widow of Aldhelm, duke of Northampton, founded a college here, in which she placed a dean and several prebendaries, or secular canons, endowing it with so many privileges, that the town acquired the name of Wulfranis Hamton, or Hamton of Wulfrana, from which the word, Wolverhampton was derived.

At the Conquest this college, which was dedicated to St. Mary, was granted to Samson, William the Conqueror's chaplain. On the death of Samson, in 1115, the Bishop of Chester laid claim to the manor and college, as lying within his diocese, and King Stephen granted it to him; but he afterwards revoked the grant, and bestowed it on the Bishop of Worcester. At a subsequent period, about the year 1200, the great possessions of the canons led them into such a licentious course of life, that Peter Blesensis, the dean, after trying unsuccessfully to reform their dissolute lives, surrendered the establishment to Hubert, archbishop of Canterbury; and it was subsequently annexed, by Edward the Fourth, to the deanery of Windsor. Many establishments of this kind were abolished in the reign of Edward the Sixth, and at that period the king took possession of the collegiate church at Wolverhampton, and presented it to the Duke of Northumberland. But not long after, being attainted

and executed for treason, in the following reign, the duke's estate became forfeited, whereupon "the queen, taking into consideration the great love which King Henry the Eighth, and other kings of England, from the time of King Edward the Third, did bear towards the dean and canons of the royal chapel of St. George at Windsor, and also because her father and other her progenitors were there buried, and the stalls of the famous order of the Garter were in the said chapel; and likewise farther considering the great loss the dean and canons sustained, by the taking the said church and lands from them, so that they were not so well able to undergo the charges belonging to them, did, by her letters patent, dated at Westminster, in the said first year of her reign, again annex the deanery of Wolverhampton to the deanery of Windsor, as formerly it had been before the act made in the first year of King Edward the Sixth." These privileges were subsequently renewed and confirmed by Elizabeth and James the First, but the deans of Windsor shortly afterwards leased the manor of Wolverhampton.

The chancel, choir, and stalls shared the usual fate of such establishments, during the Commonwealth, whereupon "one Sylvester Pierson, a clerk then of this church, thought it no offence in him not only to take away the lead, iron, &c., but even the very monuments of the dead, since his masters had got what estate belonged thereto in their private hands, upon which not only the monuments were much defaced and spoiled, but the chancel itself brought to utter ruin; and so kind were the people of those times unto him, that they never questioned him for it, but rather pitied him by reason of some hurt he received when he endeavoured to make his escape by leaping from the battlements of the church upon the north porch." Thus it remained for some years, when, an inquiry

having been made into the state of the chancel, it was reported, "Something above half the lead remains on the roof, the beams rotten at the ends, and most of the timber too bad for use again; the glass all gone, and the little iron remaining not worth much, being so eaten with rust. It is supposed that 500*l.* will but do the repairs, the stone-work being very much decayed by the wet setting in. The old stalls remain, but so rotten and out of order, that they signify little." The Dean of Windsor repaired these injuries out of his private purse.

The church was originally dedicated to the Virgin Mary; but in the time of Henry the Third the dedication was altered to that of St. Peter. It is sometimes called by both names conjointly.

Having thus given what may perhaps be termed the ecclesiastical history of Wolverhampton, we proceed to describe the town.

Wolverhampton is situated on an eminence, in a district abounding in mines of coal, iron, and limestone, which have had a great influence on its prosperity. It consists of several streets, diverging from the market-place (in the centre of which is a cast-iron pillar, forty-five feet high, supporting a gas lantern) to the several roads from which they take their names. The houses are in general substantial and neatly built of brick, many possessing much elegance. The town is rather irregularly paved, is lighted with gas, and supplied with water from wells sunk to a great depth in the rock on which it is built.

The old church, whose history we have given, is a spacious cruciform structure, partly in the early decorated, but principally in the later style of English architecture, with a handsome square embattled tower, rising from the centre, the upper part of which is a very fine specimen of the later style. The interior, with the exception of the chancel, is generally of more ancient character: the piers and arches of the nave and transepts, if not of the early English, are of that style merging into the decorated; and the pulpit, of one entire stone, is richly embellished with sculpture. An antique octagonal font, which is here seen, is supported on a shaft, the faces of which are decorated with the figures of St. Anthony, St. Paul, and St. Peter, in bas-relief. Several statues of brass and of alabaster are placed in different parts of the church, and among the relics of other days is one of those curious old epitaphs, such as we frequently meet with in country churches or church-yards:—

Here lieth, withouten miss,
The body of Richard Tomkys and his wife Allis,
Which Richard, in June the second day,
Towards Heaven he took his way.
In the year 1501 his body and bones
Were laid under this stone,
Whose soule sweete Jesu have mercy upon.

Near the south-west corner of the church-yard is a large vault, thirty feet square, the roof of which is finely groined, and supported on one central pillar: the walls are three yards in thickness, and on both sides of the doorway are slight vestiges of sculpture: the interior is in good preservation. It was probably a portion of the basement story of the ancient college built by Wulfrana.

There is a more modern church in Wolverhampton dedicated to St. John. It is rather an elegant structure, in the revived Grecian style of architecture, with a handsome tower, surmounted by a lofty and finely-proportioned spire. The prevailing character is a mixture of the Ionic and Corinthian orders. A pleasing and appropriate effect is produced by the arrangement of the interior; the altar is ornamented with a good painting of the Descent from the Cross, by Barney, a native of Wolverhampton.

Another church, dedicated to St. George, was also decided upon a few years ago, the expense being defrayed partly by public subscription and partly by the parliamentary commissioners. There are also places of worship for Baptists, Quakers, Independents, Methodists, Unitarians, and Roman Catholics.

The establishments devoted to public instruction are the Grammar-school, the Blue-coat charity school, and several Sunday-schools. The Grammar-school was founded, under letters patent of Henry the Eighth, in 1513, by Sir Stephen Jenyns, a native of Wolverhampton, and Lord Mayor of London a few years before. He endowed it with estates in the parish of Rushoe, in the county of Worcester, which with other grants produced the large revenue (for those days) of 1170*l.* per annum. The management was originally vested in the master and wardens of the Merchant Tailors' Company in London; but, on some disagreement between them and the inhabitants, they petitioned the Lord Chancellor to be released from the governorship. Consequently a decree in chancery was made, by which the governorship was vested in forty trustees, including the Bishop of Lichfield and Coventry, and the two county members for the time being. The building was erected in 1713, and is open as a school to all boys of the town; the present number on the foundation being about one hundred and fifty. The head-master has a salary of 500*l.* per annum, and the usher 200*l.*, with residences; and there are also masters for writing, drawing, French, and German, with salaries of from 70*l.* to 84*l.* per annum. The able, but somewhat eccentric, surgeon, John Abernethy, and Sir William Congreve, the inventor of the Congreve rockets, were educated at this school.

The Blue-coat charity school is a very ancient foundation for educating thirty-six boys and thirty girls, six of each sex being also clothed and maintained. It has an endowment arising from a farm at Siesdon, tenements in the town, and funded property, purchased with accumulated benefactions, producing more than 240*l.* per annum.

A public subscription library was established in 1764, which contains more than five thousand volumes, and for which a neat and commodious building was erected in 1816, when a news-room was added. Over the library is an assembly-room.

The manufacture of the finer kinds of steel ornaments, which was formerly carried on extensively, and brought to the highest perfection in this town, has given place, to some extent, to the manufacture of the heavier articles of steel and iron, of which the principal are smiths' and carpenters' tools of every description, files, nails, screws, gunlocks, hinges, steel-mills, and machinery,—locks, for the making of which the town has long been celebrated,—furnishing ironmongery, articles of brass, and japanned wares.

The iron and steel manufacturers of Wolverhampton have been celebrated from an early period. Dr. Plot, who wrote a *History of Staffordshire* about 1690, after alluding to other works in metal, says:—

Nay, so curious are they in lock-work, (indeed beyond preference,) that they do contrive a lock which shall shew, (if the master or mistress send a servant into their closet with the master-key, or their own,) how many times that servant has gone in, at any distance of time, and how many times the lock has been shot, for a whole year; some of them being made to discover it 500 or 1000 times. Farther, there was a very fine lock made in this town, sold for 20*l.*, that had a set of chimes in it that would go at any hour the owner should think fit. These locks they make in brass or iron boxes, curiously polished, and their keys finely wrought, not to be exceeded.

Many of the workmen formerly prided themselves

on making locks which should be curiosities on account of the ingenuity displayed in their construction. A workman in the last century made a padlock and key which did not exceed in weight that of a silver twopence, and another lock, made wholly of iron, which did not exceed the weight of a silver penny. He even engaged to be able to make a dozen locks, with their keys, which should not weigh more than a silver sixpence altogether.

We have said that Wolverhampton is now supplied with water by means of wells. But in the time of Dr. Plot the supply was wholly obtained from four springs, called, from the purposes to which they were applied, the *pudding* well, the *horse* well, the *washing* well, and the *meat* well. From the last-mentioned the inhabitants used to fetch all the water used in culinary operations, in leather buckets laid across a horse; while the horses were watered in a second, and linen washed in a third.

There prevailed in Wolverhampton, until towards the end of the last century, a custom which the Rev. Mr. Shaw describes. An annual procession took place, on the 9th of July, of men in antique armour, preceded by musicians playing a particular tune, and followed by the steward of the deanery manor, the municipal officers, and many of the principal inhabitants. Tradition says, the ceremony originated at the time when Wolverhampton was a great emporium of wool, and resorted to by wool-merchants from all parts of England. This procession took place on the eve of a great annual fair held in the town, which used to last sometimes fourteen days: and it has been supposed that this was originally a measure of precaution, for the preservation of peace. The men, twenty in number, were fitted out by the principal inhabitants.

There was also a festival prevalent in the last and preceding centuries, called *processioning*. On the Monday and Tuesday in Rogation week, the sacristan, prebendaries, and choristers of the collegiate church assembled at morning prayers, with the charity children, bearing long poles covered with most of the kinds of flowers then in bloom, and which afterwards carried through the streets of the town with much solemnity, the clergy, singing men and boys, dressed in their sacred vestments, closing the procession, and chanting the canticle, *Benedicite, omnia Opera*, and other portions of sacred music. "This ceremony," says Mr. Shaw, "innocent at least, and not illaudable in itself, was of high antiquity, having probably its origin in the Roman offerings of the *Primitiæ*, from which (after being rendered conformable to our purer worship,) it was adopted by the first Christians, and handed down, through a succession of ages, to modern times. The idea was, no doubt, that of returning thanks to God, by whose goodness the face of nature was renovated, and fresh means provided for the sustenances and comfort of his creatures."

THE human mind considered as that of an individual, or collectively as that of an age, or a nation, is slow and gradual in its development. At times it meets with obstructions that seem to prevent its expansion, and to retard its growth. But still it is, on the whole, found to be progressive in its march, and continual in its increase. The augmentation of its ideas to-day, becomes the preparation for a greater increase to-morrow. Every generation makes an intellectual advance beyond the preceding. Whatever doubts might exist on this subject, before the invention of printing, there can be no doubt that that art has not only accelerated, but perpetuated the intellectual progression of man. It is the opening of a better day on the prospects of the human race;—the dawn of a new era of mental improvement and intellectual activity.—FELLOWES.

THE JEWS.

III.

RESTORATION OF ISRAEL.

It is our purpose in this notice, to throw together a few facts to show that the hope of being restored to the seat of their ancient glories, animates the children of Israel in a greater degree at the present time, than it has ever yet done during their long captivity in the bands of oppression and suffering; and that they look forward with increased anticipation, to that period when

The Lord shall set his hand again the second time to recover the remnant of his people, which shall be left, from Assyria, and from Egypt, and from Pathros, and from Cush, and from Elam, and from Shinar, and from Hamath, and from the islands of the sea. And He shall set up an ensign from the nations, and shall assemble the outcasts of Israel, and shall gather together the dispersed of Judah from the four corners of the earth*.

During eighteen centuries, the Jews have been prepared for their long-wished departure to, and concentration in, the Holy Land. There has always been a constant communication kept up between them, in all parts of the globe; hence it has been remarked, that the news of any great political movement has generally reached the members of their sect before the constituted authorities; and thus, many of them are, in European nations, connected with the funds, and other money-dealings. So rapid and accurate is their mutual communication, that Frederick the Great confessed the earlier and superior intelligence obtained through the Jews, of all affairs of moment. They are always in readiness for that great event; for the property they accumulate is mostly of a moveable kind.

Comparatively few of the Jews, (says Dr. Henderson, speaking of those of Poland, where the largest number of them are congregated,) learn any trade; and most of those attempts which have been made to accustom them to agricultural habits, have proved abortive. Some of those who are in circumstances of affluence, possess houses and other immovable property; but the great mass of the people seem destined to sit loose from every local tie, and are waiting with anxious expectation, for the arrival of the period, when in pursuance of the Divine promise, they shall be restored to what they still consider *their own land*. Their attachment, indeed, to Palestine is unconquerable.

Mr. Herschel states that

Several thousand Jews of Poland and Russia have recently bound themselves by an oath, that as soon as the way is open for them to go up to Jerusalem, they will immediately go thither, and there spend their time in fasting and praying unto the Lord, until He shall send the Messiah. Although it was (continues the same writer) comparatively a short time since I had intercourse with my brethren according to the flesh, I found a mighty change in their minds and feelings, in regard to the nearness of their deliverance. Some assigned one reason and some another, *but all agreed in thinking that the time is at hand*.

Large bodies, moreover, have acted on this impulse, and the number of Jews in Palestine has been multiplied twenty-fold: though within the last forty years, scarcely 2000 of that people were to be found there, they amount now to upwards of 40,000; a multitude which is increasing by large annual additions. Indeed, of so great importance has this rapidly-increasing community been considered by our Government, that a British vice-consul was, in September last, appointed to reside in Jerusalem, where he is now fixed; his jurisdiction extending to the whole country within the limits of the Holy Land; "he is thus accredited, as it were, to the former kingdom of David and the Twelve Tribes."

* Isaiah, xi. 11, 12.

† *Biblical Researches, and Travels in Russia.*

‡ *Quarterly Review* for January, 1839, p. 188.

In all parts of the earth, this extraordinary people, whose name and sufferings are in every nation under heaven, think and feel as one man, on the great issue of their restoration: the utmost east and the utmost west, the north and south, both small and large congregations, those who have frequent intercourse with their brethren, and those who have none, entertain alike the same hopes and fears. Dr. Wolff (*Journal*, 1833) heard these sentiments from their lips, in the remotest countries of Asia: and Buchanan asserts that wherever he went among the Jews of India, he found memorials of their expulsion from Judea, and of a belief of their return thither*.

The liberality with which Jews are now regarded, is among one of the most gratifying evidences of the superior enlightenment prevailing at the present time. Their intercourse with Christians is daily becoming freer and closer; and its effects in awakening them from the darkness of error, and in loosening their faith in the many absurdities of the Talmud, are not less evident. The labours of Christian missionaries among the Hebrews have been rewarded with the richest fruits.

In reference to the changes taking place in the Jewish mind, (writes one of them,) a Jewish schoolmaster remarked: "There is a struggle going on, of which you can have no idea; we do not know ourselves what we want, or what will be the end of it." In reply to some remark which assumed that he believed his religious creed to be right, he said: "Oh, do not suppose that I am certain; I think I am right, but I am in doubt. You will never find a Jew who will certainly say that he is right."

Dr. Wolff, as we have already stated, was listened to with patience and attention, in the East, while preaching the doctrines of Christ. Converts from the darkness of Judaism are rapidly augmenting in all parts of the world; but the most gratifying evidences of the fast increasing power of the Church of the Saviour, is the following information contained in a recent number of the *Quarterly Review*.

A more important undertaking has already been begun by the zeal and piety of those who entertain an interest for the Jewish nation. They have designed the establishment of a church at Jerusalem, if possible, on Mount Zion itself; where the order of our service and the prayers of our Liturgy shall be set before the faithful in the Hebrew language. A considerable sum has been collected for this purpose; the missionaries are already resident on the spot; and nothing is wanting but to complete the purchase of the ground on which to erect the sacred edifice. Mr. Nicolayson having received ordination at the hands of the Bishop of London, has been appointed to the charge; and Mr. Pieritz, an Hebrew convert, is associated in the duty. The service, meanwhile, proceeds, though "the Ark of God is under curtains;" and a small, but faithful, congregation of proselytes hear daily the evangelical verities of our Church, on the mount of the Holy City itself, in the language of the prophets, and in the spirit of the apostles. To any one who reflects on this event, it must appear one of the most striking that have occurred in modern days, perhaps in any days since the corruptions began in the Church of Christ.

It may be that it only remains for the great mass of Hebrews to turn from the error in which they have blindly persevered, from the fearful day of the crucifixion to the present, for the prophecy to be fulfilled which promises "the Lord will make Jerusalem a praise upon earth," (Isaiah lxii. 7); and it should be the prayer of every sincere Christian, that the Jew shall be enabled to see the great light of Christianity†; which is the only sure guide to that faith by which alone he can hope to re-establish his temporal, and to secure his eternal welfare.

* *Quarterly Review*, for January, 1839, p. 178.

† Mr. DAVENPORT'S Report from Mouraclaaw, in "*Jewish Records*," for September, 1838.

‡ "They forget a main point of the Church's glory who pray not daily for the conversion of the Jews."—ARCHBISHOP LEIGHTON'S *Sermon on Isaiah, lx. 1.*

ENGLAND IN THE OLDEN TIME.

No. XI.

MINSTRELS, JUGGLERS, AND DANCERS. 3.



WE now proceed to bring down our notice of these public exhibitors to the last century. The *Bards* or *Minstrels* had long since ceased to hold a rank in the estimation of society; we shall therefore direct our attention to exhibitors of another kind.

The *clowns* or *fools* of the present day are a remnant of a class which was much relished some centuries back. The *jester's* or *fool's* dance was a favourite diversion. These fools were men who decorated themselves out in a fantastic manner, hanging bells, &c. to their caps and clothes, as is represented in the two engravings at the head and foot of the present Article. They sometimes exercised themselves in a regular sort of dance; and at other times played antics of every kind: their object being to raise a boisterous laugh by absurdities however extravagant. There used anciently to be a *festival of fools* celebrated at Christmas time, in which the performers indulged in mockeries ill suited to the religious associations of that season.

Another dance of bygone times, and which is not yet quite in disuse, was the *morris* dance, which is supposed by some to have derived its name from the Moors or Moriscos of Spain, who had a dance in some respects similar to it. The dresses of the *morris*-dancers two or three centuries ago, were adorned with bells, which were not placed there merely for the sake of ornament, but were intended to sound to the measure of the dancer's feet.

These bells were of unequal sizes and differently named, such as the *fore* bell, the *second* bell, the *treble*, the *tenor*, the *great* bell. The principal dancer in the *morris* dance was more richly dressed than his companions.

The *morris*-dancers do not appear to have been of a definite number in each set or company: sometimes five, and at other times ten, exclusive of musicians, formed the company. They were also generally accompanied by a *hobby-horse*, which was a ludicrous figure, formed thus:—the resemblance of the head and tail of a horse, with a light wooden frame for the body, was attached to the person who was to perform the double character, covered with trappings reaching to the ground, so as to conceal the feet of the actor, and prevent its being seen that the supposed horse had none. Equipped in this manner, the performer was to prance about, imitating the curvettings and motions of a horse.

There was another dance in vogue called the *egg*-dance, which appears to have consisted in the following feat:—a number of eggs, about twelve or fourteen, were placed at certain distances, in a stage or stand; the dancer, taking his station, was blindfolded, and

a hornpipe being played by the musicians, he went through all the paces and figures of the dance, passing backwards and forwards between the eggs, without touching or breaking any of them.

It is needless to enumerate all the grotesque dances which have from time to time been devised for the amusement of the populace; we will content ourselves with one more:—Strutt, writing in the last century, says: "A few years ago there was a fellow that used to frequent the different public-houses in the metropolis, who, mounting a table, would stand upon his head with his feet toward the ceiling, and make all the different steps of a hornpipe upon it, for the diversion of the company. His method of performing was to place a porter-pot upon the table, raised high enough for his feet to touch the ceiling when his head was upon the pot. I have been told that many publicans would not permit him to come into their houses, because he had damaged the ceiling, and in some places danced some of it down."

We have before had occasion to speak of rope-dancers two or three centuries ago; we must here allude to one of the last century, exhibited about a hundred years ago at Hertford. A rope was stretched from the top of the tower of All Saints Church, and brought obliquely to the ground at the distance of about eighty yards from the bottom of the tower, where, being drawn over two strong pieces of wood nailed across each other, it was made fast to a stake driven into the ground: two or three feather beds were then placed upon the cross timbers, to receive the performer when he descended, and to break his fall. He was also provided with a flat board, having a groove down the middle, which he attached to his breast; and when he was about to exhibit, he laid himself on the top of the rope, with his head downwards, and adjusted the groove to the rope, his legs being held by a person appointed for that purpose, until he had properly balanced himself. He was then let free, and descended with incredible velocity, from the top of the tower to the feather beds. He performed this feat three times a day; the first time he descended without holding anything in his hands; the second time he blew a trumpet; and the third, he held a pistol in each hand which he discharged as he came down. This man had lost one of his legs, and its place was supplied with a wooden leg, which was furnished on this occasion with a quantity of lead sufficient to counterpoise the weight of the other.

Still more perilous, though effected without the aid of a rope, was the feat of a Dutchman named Peter, in 1553, of whom Holinshed speaks. He "stoode upon the weathercocke of St. Paul's steeple, holding a streamer in his hands of five yards long, and waving thereof. He sometimes stood on one foot and shook the other, and then he kneeled on his knees, to the great marvell of all the people. He had made two scaffolds under him; one above the cross, having torches and streamers set upon it; and another above the ball of the cross, likewise set with streamers and torches which would not burn the wind was so great. Peter had sixteene pounds, thirteene shillings, and foure pence, given to him by the citie for his costs and paines, and for all his stuffe." This was one of the exhibitions in honour of Queen Mary.

The last century was by no means deficient in those exhibitions of vaulting over horses, garters, wagons, &c.,—balancing straws, feathers, ladders, wheels, &c., on different parts of the body,—posturing in the most grotesque and unnatural forms, &c., which the populace of the present day occasionally run after so eagerly. Indeed there is scarcely a marvellous exhibition belonging to any of these classes, and which is

occasionally witnessed at present, but what was fully equalled a century or two back.

The last remark will apply to that class of conjurors, called *fire-eaters*. There was a man named Powell, about eighty years ago, who used to eat the burning coals from the fire; he put a large bunch of matches, lighted, into his mouth, and blew the smoke of the sulphur through his nostrils; he carried a red hot heater round the room in his teeth, and broiled a piece of beef steak upon his tongue. To effect this last feat, he lighted a piece of charcoal, which he put into his mouth beneath his tongue, the beef was laid upon the top, and one of the spectators with a pair of bellows blew upon the charcoal, to prevent the heat from decreasing till the meat was sufficiently broiled. By way of conclusion he made a composition of pitch, brimstone, and other combustibles, to which he added several pieces of lead: the whole was melted in an iron ladle and then set on fire; this he called his soup, and taking it out of the ladle with a spoon of the same metal, he ate it in its state of liquefaction, and blazing furiously, without appearing to sustain the least injury. Strutt witnessed the performances of this man, and described them just as he saw them.

As a conclusion to our article we shall briefly allude to that class of persons called *mountebanks*. This was a vagrant dealer in medicines, who had set up a stage at a particular place, and vaunted forth the merits of his drugs, his travelling shop being enlivened by music, dancing, tumbling, and other non-medical performances. It need hardly be said that these men were very little better than cheats and swindlers. In the "Spectator," these mountebanks were severely ridiculed, and one of them who exhibited at Hammersmith is thus handed down to fame. "He told his audience that he had been born and bred at Hammersmith, and, having a special regard for the place of his nativity, he was determined to make a present of five shillings to as many as would accept it. The whole crowd stood agape, and ready to take the doctor at his word; when putting his hand into a long bag, as everyone was expecting his crown-piece, he drew out a handful of little packets, each of which he informed the spectators, was constantly sold for five shillings and six-pence, but that he would bate the odd five shillings to every inhabitant of that place. The whole assembly immediately closed with this generous offer, and took off all his phisic, after the doctor had made them vouch that there were no foreigners among them, but that they were all Hammersmith men." What was the real value of these packets, the reader will not have much difficulty in guessing.

We here close our notice of that large class of exhibitors, who, under the names of minstrels, bards, dancers, jugglers, fools, vaulters, tumblers, mounte-



banks, &c., contributed to the amusement of our forefathers. We should do well to reflect a little how far we have improved upon bygone ages in these matters, how far we have arrived at more rational and intellectual modes of amusement. The printing-press *ought* to have made great changes in this respect; and if we admit that such changes have been made, we must also admit that much yet remains to be done. The proper dignity of the human being is scarcely consulted in the prosecution of such amusements.

ARTESIAN WELLS.

THIS name is applied to a convenient mode of obtaining water, which has come into use in recent times, and which in many cases saves a large portion of the expense necessarily attendant on digging a well. The term *Artesian* has been given to this contrivance, on account of the province of Artois, in France, having been the first place where these wells were employed, or at least where they have been most numerous constructed. The distinctive characteristic of these wells is, that they are formed by *boring* instead of *digging*; and we proceed to detail the nature of the process.

The borers generally dig a circular hole about six or eight feet in diameter and nearly as many in depth, at the spot where the well is to be situated. The workmen then attach a sort of chisel to a long handle capable of being worked by two men, and with this chisel they begin to penetrate perpendicularly into the ground: if the ground be tolerably soft, the weight of the two workmen, bearing upon the handle, and occasionally forcing it round, will soon cause the chisel to penetrate; but if the ground be hard or strong, the workmen strike the chisel down with repeated blows, so as to make an incision.

When a hole has thus begun to be formed, the chisel is removed, and a kind of cylindrical auger is attached to the cross handle, and let down into the hole: the object of this is to bring up the loose stones and rubbish that the chisel may have cut in its passage; and this is effected by a kind of valve situated within the auger.

Matters are now ready for the more extensive process of *boring*. The chisel is lengthened, by attaching an iron rod to its upper end, the top of the rod being fastened to the cross wooden handle at which the workmen are stationed. With this lengthened chisel the workmen proceed as before, either forcing it down through the ground by turning the handle and pressing upon it, or else striking it when the ground is hard and firm. When the hole is thus perforated as deep as the length of the chisel will allow, the chisel is drawn up again, removed from the rod, and the auger fixed on in its place: this auger again collects and draws up the loose rubbish resulting from the working of the chisel.

The auger is again removed, another length of iron rod screwed on, and the chisel again attached to the lower end. With this lengthened apparatus the boring is continued as far as the length will permit, after which the loose stones and dirt are removed by detaching the chisel and employing the auger in its place. Thus the workmen proceed, attaching one rod after another as they penetrate deeper into the earth, and removing the rubbish before they lengthen the line of rods. When the depth attained is considerable, the task of drawing up the rods and chisel is too laborious for the men; there is, therefore, an arrangement of levers and pulleys, or some other mechanical assistance, by which the rods are more easily drawn up.

Each rod is about six or seven feet in length; and

the chisel employed is about two inches and half wide, the auger being somewhat less. After the perforation is made, another instrument is inserted in lieu of the chisel, by which the hole is widened to four inches. In some instances, however, the workmen employ, from the outset, a chisel four inches wide, by which the required width is attained at once.

The reader may now naturally inquire how far this boring is carried on? The answer is simple:—until the perforation descends to a spring of water, which suddenly rises up the hole, and flows out at the surface; and this is frequently not attained but at a depth of several hundred feet, and the boring must be continued until the proper depth is attained. When this occurs, the chisel and auger are dispensed with, and another instrument is forced down, whose shape is such as to give a smooth and cylindrical form to the bore, and thus to prepare it for the reception of a metallic pipe. The uses of such a pipe are various. The soil might be so soft as to fall in, and choke the aperture, when the instruments are removed, and the strata through which the boring is carried may contain many mineral substances which would impregnate the water derived from the spring below.

To obviate these evils, the hole is cased for a considerable depth with a metallic pipe of tin or copper, about a quarter of an inch smaller than the bore; and up through this pipe the pure spring water from below flows, and present itself, at the surface of the ground, either as a reservoir from whence water may be dipped, or as a fountain, which may be made available in many ways.

We must now proceed to speak of the principles by which a stream of water is enabled thus to spout up through the ground, a subject which involves several points of interest.

We have many instances in nature of the tendency of fluids to assume a level surface. The water of a lake is not more elevated at one side than at another: if a pipe, open at both ends, be inserted in the water, the latter will rise to the same height within the pipe as in other parts of the lake: if bent channels of any kind be in connection with the lake at different parts, the water will rise to the same height in different parts of these channels: when we see a cistern at the top of a house in London supplied with water, we may be convinced that the water is derived from a reservoir at least as elevated as the cistern; and that the phenomenon is nothing more than an instance of a liquid maintaining its own level. Bearing this important Hydrostatic principle in mind, we shall be able to understand the nature of the source of the water which flows through an Artesian well.

Suppose a range of mountainous country, the substance of the mountain consisting of porous strata of different kinds of earth; and that a heavy shower of rain falls, perhaps of several days' continuance:—what follows? A considerable portion of the rain doubtless flows down the sides of the mountains, and forms numberless streams of greater or less extent. But there is a considerable portion which does not do so; but which penetrates into the soil, and sinks to a variable depth therein. This water is not, however, lost, merely because it appears to be absorbed by the soil: the interstices between the little grains of sand, gravel, &c., act like small tubes or channels which suffer the water to flow down from the upper to the lower parts of the mountain.

In this way we may suppose the water percolates through a porous strata to a depth of two or three hundred feet from the surface; and that at that depth it meets with a stratum of stone, of cohesive clay, or

of some other substance which will not so easily admit water to insinuate itself through it. The water, in such case, will follow the windings of the porous strata, and will descend the mountain, if the strata in question do so.

This process may, perhaps, continue for several consecutive rainy periods, until the sandy porous strata are saturated with water. There may also be a cavity in the upper part of the mountain, occasioned by some of those convulsions of nature which the geological appearances of the earth present evidence of; and this cavity would in such case be likely to be soon filled with water. We should then have a reservoir of water at the top of the mountain, and a number of minute streams of water descending from it, and passing down to the valley at the foot of the mountain; for the sandy strata of which we speak, may be carried beneath the surface soil of the valley, as well as beneath that of the mountain.

We are now in a condition to suppose the well-borer to commence his operations. He has some reasons for believing that small streams or springs of water exist beneath the surface of the valley, and he bores through the soil in the manner that we have described. At a particular depth, his boring-tools reach one of the little streams which we have supposed to flow down from the mountain; and immediately the hydrostatic principle before alluded to begins to show its mode of operation. We have, in effect, a curved channel: a reservoir high up the mountain; a continuous stream from thence to a sandy stratum a considerable distance beneath the surface of the valley; and a perpendicular cylindrical aperture from thence to the surface. Under these circumstances, the water tends to assume as high a level at one end of the channel as at the other, and thus ascends the Artesian well; and having once flowed in this direction, will continue to do so as long as any remains in the reservoir.

The suppositions which we have made in this matter are such as would seem most likely to give a clear idea on the subject; but it will, of course, be admitted that they are not always necessary:—for instance, it is not necessary that the reservoir of which we speak should be in a mountain: it is sufficient that it be a little more elevated than the required height of the water in the Artesian well.

We have supposed that rain is the source of the water which supplies an Artesian well; but in practice there are great difficulties in accurately determining what is really the source from whence it proceeds. For instance, M. Arago has remarked that at the fountain at Vaucluse, in France, where the water rises much on the same principle as in an Artesian well, the quantity of water which it pours forth in a year is more than could result from all the rain which falls on a surface of ground of thirty square leagues in extent. The quantity is not always the same; at some periods being 480 cubic yards per minute, and at others nearly 1500. It is therefore imagined that the reservoir from whence it proceeds, and the natural channels through which it flows, are of a large size; and that there must be some other source of the water besides rain.

Sometimes the borers met with a reservoir of water in the course of their perforations; an instance of which is mentioned by M. Arago. Some workmen were boring a well near the Barrière de Fontainebleau, at Paris. In the course of their operations, the boring rod suddenly descended between twenty and thirty feet; and from a particular pressure which was felt upon the instrument in one direction it was evident that the boring rod was immersed in water, and subject to the action of a running stream.

Artesian wells are formed at all depths, from a few feet to upwards of a thousand; and in some cases, they yield upwards of four hundred gallons of water per minute.

It has been stated, that an Artesian well has been sunk in the great desert between Suez and Cairo in Egypt, which is likely to prove of important value. The workmen first bored to a depth of 150 feet through clay and sandstone, without meeting with any water:—they then dug in another spot to a depth of fifty feet through hard stone, but with equal want of success; but at a third spot they were so fortunate as to meet with water at a depth of only thirteen feet below the surface, in a stratum of clay covered by another stratum of calcareous sandstone.

In France, the water which spouts up through Artesian wells, is frequently made a moving power for machinery; being brought to act upon corn-mills, hammers and bellows for forging, wheels in a silk-manufactory, &c.

BAYS AND HARBOURS IN NEW ZEALAND.

THE Bay of Islands is situated on the East coast of New Zealand, distant about eighty miles from the North Cape. This harbour is well known to Europeans, having been the resort, for the last forty years, of the South-Sea ships that pursue the sperm and black whale fishery in the Southern hemisphere. Marion and Crozet in 1772, and Cook in 1774, were the first Europeans that anchored in this part, and their successors have become so numerous, that, according to official reports, 250 ships now annually visit this port, and the number is still on the increase. Here are procured ample refreshments, from Europeans who have long resided on its shores, and who supply various articles of ship-chandlery, as well as from the natives, who plant potatoes, Indian corn, vegetables and fruits, and rear pigs and poultry.

Mr. Yate says, "The Bay of Islands is the largest bay on the eastern coast of New Zealand, affording good anchorage from all winds. It is a remarkably fine and capacious harbour, affording shelter for an almost unlimited number of vessels, in all weathers and all seasons of the year. The value of this harbour is much enhanced from the perfect ease and security with which vessels are able to enter it. Its width from point to point is eleven miles, affording sea-room for the largest ships to beat in when the wind is contrary; and the coast is so bold, that they may approach very near to the shore without danger. Hokianga, having a bar at its entrance, is seldom visited. The Thames is a roadstead open to the winds and waves; but when a gale blows in from the sea, vessels of 130 tons may with some difficulty be worked into the narrows, and there find secure moorings; in leaving this part of the harbour, however, without a fair wind, there would be great hazard of striking on the sands, or in the mud. The Maehia, Hicks' and Hawke's Bays, are all open, and afford no shelter that can at all be depended upon, except when the wind blows off the land. Port Nicholson, and Cloudy Bay, in Cook's Straits, have good anchorage, but none to surpass or even equal that of the Bay of Islands."

The river Waitangi is situated on the west side of the harbour; the land on the south belongs to the Church Missionary Society, and that on the opposite side is the residence and property of Mr. Busby, formerly the British official resident. The waterfall is situated at the head of the sea communication of the river, where the land rises on either side into eminences of basalt, of sufficient height to form the

barrier for the waterfall, which derives its source from an inland lake situated mid-way between Hokianga on the opposite coast, and the Bay of Islands, and after meandering in a serpentine direction through perhaps eighteen miles of a rich grain country, joined in its course by several minor rivulets of pure fresh water, dashes unceasingly over its rocky bed into the salt water below the falls.

Mr. Nicholas, in his *Voyage to New Zealand* in 1814, says, "We rowed to the head of a cove where we were told there was a large waterfall. The place mentioned was not far distant from the level ground, and we found there such a powerful fall of water as would, in the event of the natives being civilized, be capable of working the largest machinery, and which thus might be made exceedingly valuable.

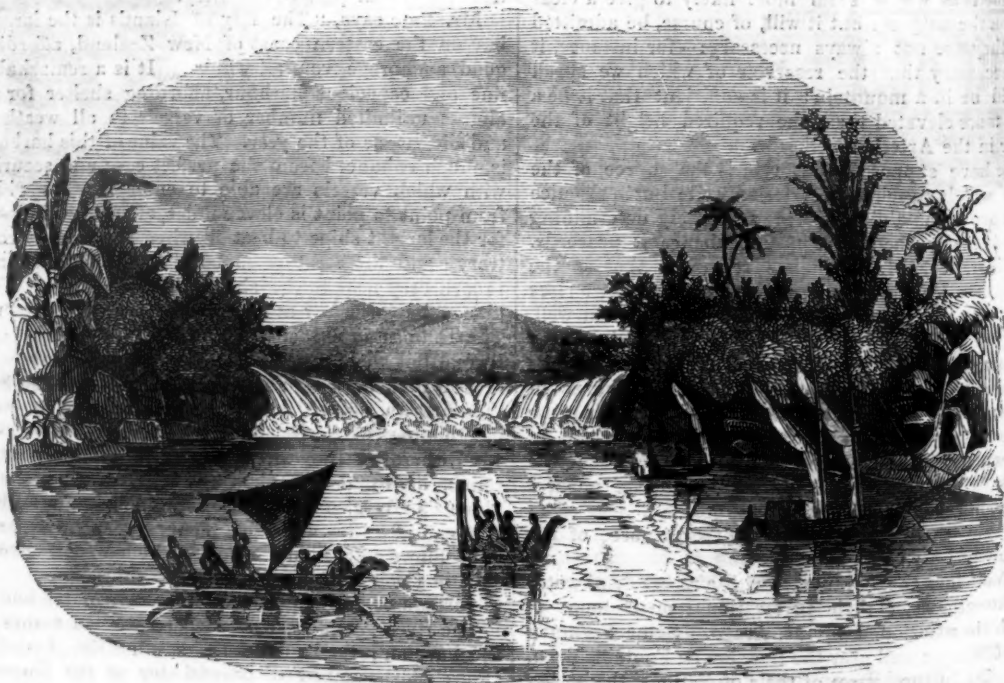
"In approaching the head of the cove, we discovered a natural fall, about 100 feet long and 16 feet deep, over which flowed a river, that came from some distance in the interior and discharged itself into the bay. This river, from its appearance, was never flooded, its stream being neither deep nor rapid, but flowing quietly along in a smooth and regular manner. A fall of water like this, so admirably adapted for various purposes, such as mills for grinding corn and sawing timber, would at Port Jackson be a fortune for its possessor. When the tide is at its height, there is from six to seven feet water, rising close up to the wall, and sufficient for large craft to come along-side."

Mr. Yate describes the lake as "nearly eight miles across at the widest and six at the narrowest part. From this lake proceeds the stream called the Waitangi, a narrow rapid rivulet running through several deep valleys, until it empties itself over a beautiful fall of about twenty feet perpendicular into the waters of the Bay of Islands."

Mr. Polack in his narrative of travels and adventures in New Zealand, says, "A beautiful fall of water,

and from its locality an invaluable one, disembogues itself over a natural basaltic wall, 100 feet in width, and 20 feet in depth, into the salt water of the Bay of Islands. This fall is constantly jetting a heavy body of water into the river Waitangi, that has its origin in a beautiful lake of fresh water situated between the Bay of Islands and Hokianga. This lake is about seven miles in average width, forming nearly a circle, and is celebrated for large conger-eels, which are of much repute among the natives. On the north side, a few paces above the fall, is situated a beautiful flat of garden land, bounded at the back by an abrupt natural wall of singular appearance." The waterfall is admirably calculated for a succession of mill properties on an extensive scale; for flour, cotton, flax, timber, sawing, and similar machinery, as its waters never cease to flow even during the most intense heat of summer.

The rare occurrence of a natural fall of water, in the vicinity of the future capital of a country, has induced many enterprising individuals, more particularly in America, to attempt the formation of artificial ones. A work of this kind has been for some years in progress on the river Kennebec, in the state of Maine, on which two millions of dollars had been expended up to November, 1837; but though the engineering had been ably conducted, and enormous masses of stone, excavated near the spot, had been let into the dams, the works were destroyed by the heavy floods that rush down the river in the rainy season, scattering the works and destroying the bridge thrown across the river. Large blocks of stone lodged on the shallows, forming small islets, and obstructing the navigation of the river. The proposed works were intended to work mills for the manufacture of cloths, linens, and similar fabrics. The Kennebec is frozen up during six months of the year.



CASCADE IN THE WAITANGI.